

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in this application.

LISTING OF CLAIMS

1. (Canceled)
2. (Canceled)
3. (Canceled)
4. (Canceled)
5. (Canceled)
6. (Canceled)
7. (Canceled)
8. (Canceled)
9. (Canceled)
10. (Canceled)

11. (Canceled)

12. (Canceled)

13. (Canceled)

14. (Canceled)

15. (Canceled)

16. (Canceled)

17. (Currently Amended) A position detecting sensor for detecting a position of a magnetic body, comprising:

a first yoke comprising a main body portion and a projecting portion extending from the main body in a direction at right angles to the main body portion, the projecting portion possessing a tip end;

a first magnet disposed at one end of the main body portion, the first magnet possessing a north end and a south end;

a second magnet disposed at an opposite end of the main body portion, the second magnet possessing a north end and a south end;

a second yoke positioned so that a space exists between the second yoke and the tip end of the projecting portion;

~~a third yoke positioned parallel with the projecting portion;~~

a magnetic detecting element disposed in the space between the second yoke and the tip end of the projecting portion;

first magnetic flux from the first magnet travels from the north end of the first magnet towards the second yoke, then flows back to the south end of the first magnet via the magnetic detecting element and the projecting portion;

second magnetic flux from the second magnet travels from the north end of the second magnet towards the second yoke via the projecting portion and the magnetic detecting element, then flows back to the south end of the second magnet;

lines of magnetic flux from the first magnet flow in an opposite direction to the lines of magnetic flux from the second magnet at the magnetic detecting element;

the magnetic fluxes from the first and second magnets passing through the magnetic detecting element are cancelled with each other when the magnetic body is positioned at a place near or adjacent to the position detecting sensor at which the first magnetic flux passes through [te] the magnetic body; and

the magnetic flux passing through the magnetic detecting element becomes substantially greater than a predetermined threshold value when the magnetic body is positioned away from the position detecting sensor;

wherein the first and second magnets at both ends of the main body portion differ from each other in at least one dimension.

18. (Currently Amended) A position detecting sensor according to claim 17, further comprising a third yoke positioned parallel with the projection portion,

wherein the third yoke is formed integrally with the second yoke to form a substantially L-shaped configuration.

19. (Currently Amended) A position detecting sensor according to claim 17, further comprising a third yoke positioned parallel with the projecting portion, wherein the third yoke is separated from the second yoke by a predetermined distance.

20. (Canceled)

21. (Currently Amended) A position detecting sensor according to claim [20] 17, wherein the at least one dimension is a thickness of the first and second magnets in an extending direction of the main body of the first yoke.

22. (Currently Amended) A position detecting sensor according to claim [20] 17, wherein the at least one dimension is a length perpendicular to an extending direction of the main body of the first yoke.